

FORM PTO-1449

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICEATTY. DOCKET NO.
2997-1-3-1-3-DIVSERIAL NO. 09/639/26
~~NOT YET ASSIGNED~~INFORMATION DISCLOSURE STATEMENT
(Use several sheets if necessary)APPLICANT
BARCLAYFILING DATE 8/15/00
Filed HerewithGROUP ART 1651
~~NOT YET ASSIGNED~~DC87 U.S. PTO
09/639/26

08/15/00

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROP.
<i>Deu</i>	AA	5,415,879	5/16/95	Oh	426	2	
<i>Deu</i>	AB	5,234,699	8/10/93	Yeo	426	2	
<i>Deu</i>	AC	5,012,761	5/7/91	Oh	119	6.8	
<i>Deu</i>	AD	4,918,104	4/17/90	Weiss et al.	514	560	
<i>Deu</i>	AE	4,792,418	12/20/88	Rubin et al.	260	412	
<i>Deu</i>	AF	4,758,438	7/1988	Stroz et al.	426	3	
<i>Deu</i>	AG	4,304,794	12/1981	Dwivedi et al.	426	548	
<i>Deu</i>	AH	3,924,017	12/1975	Lee et al.	426	548	
<i>Deu</i>	AI	3,908,028	9/1975	Neely et al.	426	538	
<i>Deu</i>	AJ	3,908,026	9/1975	Neely et al.	426	538	
<i>Deu</i>	AK	3,667,969	6/1972	Kracauer	99	141A	
<i>Deu</i>	AL	3,647,482	3/1972	Yueh	99	141A	
<i>Deu</i>	AM	3,296,079	1/1967	Griffin	167	93	
<i>Deu</i>	AN	5,130,242	07/14/92	Barclay	345	134	
<i>Deu</i>	AO	4,670,285	06/02/87	Clandinin et al.	426	602	
<i>Deu</i>	AP	5,340,742	08/23/94	Barclay	435	256-8	
<i>Deu</i>	AQ	5,340,594	08/23/94	Barclay	426	49	
<i>Deu</i>	AR	5,688,500	11/18/97	Barclay	424	93.1	

EXAMINER

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DATE CONSIDERED

12-12-00

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FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION	
							YES	NO
<i>Stu</i>	AS	WO 89/00606	1/26/89	PCT	—	—		
<i>Stu</i>	AT	WO 88/10112	12/29/88	PCT	—	—		
<i>Stu</i>	AU	60-105471	10/6/85	JAPAN	—	—		
<i>Stu</i>	AV	58-213613	6/10/85	JAPAN	—	—		
<i>Stu</i>	AW	58-196068	5/17/85	JAPAN	—	—		
<i>Stu</i>	AX	WO 92/12711	08/06/92	PCT	—	—		
<i>Stu</i>	AY	WO 91/14427	10/03/91	PCT	—	—		
<i>Stu</i>	AZ	0 231 904 A2	08/12/87	EPO	—	—		

OTHER ART (Including Author, Title, Date, Pertinent Pages, etc.)

<i>Stu</i>	BA	Ainsworth, "Introduction and Keys to Higher Taxa.", pp. 1-7, 1973, in <i>The Fungi. An Advanced Treatise</i> , Vol. 4B, (G.C. Ainsworth et al. eds., Academic Press)
<i>Stu</i>	BB	Bahnweg et al., "A New Approach to Taxonomy of the Thraustochytriales and Labyrinthulales", pp. 131-140, 1986, in <i>The Biology of Marine Fungi</i> , (S.T. Moss ed., Cambridge University Press)
<i>Stu</i>	BC	Bartnicki-Garcia, "The Cell Wall: A Crucial Structure in Fungal Evolution", pp. 389-403, 1988, in <i>Evolutionary Biology of the Fungi</i> , (A.D.M. Rayner et al. eds., Cambridge University Press)
<i>Stu</i>	BD	Behrens et al., "Eicosapentaenoic Acid from Microalgae", p. 623, col. 2, abstract no. 193025d, 1989, Chemical Abstracts, Vol. 111, No. 21, Nov. 20.
<i>Stu</i>	BE	Cavalier-Smith, "The Origin of Nuclei and of Eukaryotic Cells", pp. 463-468, 1975, <i>Nature</i> , Vol. 256
<i>Stu</i>	BF	Cerda-Olmeda et al., "A Biography of <i>Phycomyces</i> ", pp. 7-26, 1987, in <i>Phycomyces</i> , (Cerda-Olmeda et al. eds., CSH Laboratory)
<i>Stu</i>	BG	Couch et al., 1973, <i>Lipids</i> , 8(7):385-392

EXAMINER <i>John H. Kwan</i>	DATE CONSIDERED 12-12-00
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<i>Stu</i>	BH	Cruickshank, 1934, "Studies in Fat Metabolism in the Fowl" in <i>Biochem. J.</i> , 28:965-977
<i>Stu</i>	BI	Dick, "Saprolegniales", pp. 113-144, 1973, in <i>The Fungi. An Advanced Treatise</i> , (G.C. Ainsworth et al. eds., Academic Press))
<i>Stu</i>	BJ	Ellenbogen, "Polyunsaturated Fatty Acids of Aquatic Fungi: Possible Phylogenetic Significance", pp. 805-811, 1969, <i>Comp. Biochem. Physiol.</i> , Vol. 29
<i>Stu</i>	BK	Emerson, "Current Trends of Experimental Research in the Aquatic Phycomycetes", pp. 169-200, 1950, <i>Ann. Rev. Micro.</i> , Vol. 4
<i>Stu</i>	BL	Erwin, "Comparative Biochemistry of Fatty Acids in Eukaryotic Microorganisms", pp. 41-143, 1973, in <i>Lipids and Biomembranes of Eukaryotic Microorganisms</i> , (J. Erwin ed., Academic Press
<i>Stu</i>	BM	Findlay et al., "Biochemical Indicators of the Role of Fungi and Thraustochytrids in Mangrove Detrital Systems", pp. 91-103, 1986, in <i>The Biology of Marine Fungi</i> , (S.T. Moss ed., Cambridge University Press)
<i>Stu</i>	BN	Fisher et al., 1957, <i>J. Nutr.</i> , 63:119-129
<i>Stu</i>	BO	Fuller, et al., "Isolation and Pure Culture Study of Marine Phycomycetes", pp. 745-756, 1964, <i>Mycologia</i> , Vol. 56
<i>Stu</i>	BP	Gellerman et al., "Methyl-Directed Desaturation of Arachidonic to Eicosapentaenoic Acid in the Fungus, <i>Saprolegnia Parasitica</i> ", pp. 23-30, 1979, <i>Biochim. Biophys. Acta</i> , Vol. 573
<i>Stu</i>	BQ	Goldstein, "Development and Nutrition of New Species of Thraustochytrium", pp. 271-279, 1963, <i>Am. J. Bot.</i> , Vol. 50
<i>Stu</i>	BR	Goldstein et al., "Biology of a Problematic Marine Fungus, <i>Dermocystidium</i> sp. II. Nutrition and Respiration", pp. 468-472, 1969, <i>Mycologia</i> , Vol. 61
<i>Stu</i>	BS	Goldstein et al., "Biology of a Problematic Marine Fungus, <i>Dermocystidium</i> sp. I. Development and Cytology", pp. 1-11, 1966, <i>Archiv for Mikrobiologie</i> , Vol. 53.1
<i>Stu</i>	BT	Henderson et al., "Lipid Composition and Biosynthesis in the Marine Dinoflagellate <i>Cryptocodinium Cohnii</i> ", pp. 1679-1683, 1988, <i>Phytochemistry</i> , Vol 27. No. 6
<i>Stu</i>	BU	Hori et al., "The Nucleotide Sequence of 5S rRNA from a Cellular Slime Mold <i>Dictyostelium Discoideum</i> ", pp. 5535-5539, 1980, <i>Nucl. Acids Res.</i> , Vol. 8
<i>Stu</i>	BV	Hunter, "Fish Oil and Other Omega-3 Sources", pp. 1592-1596, 1987, <i>J. Am. Oil Chem. Soc.</i> , Vol. 64
<i>Stu</i>	BW	Jong et al., "American Type Culture Collection Catalogue of Fungi/Yeast", pp. 350 and 378, <i>American Type Culture Collection</i> , 17th Edition, 1987.
<i>Stu</i>	BX	Kates, "Techniques of Lipidology: Isolation, Analysis and Identification of Lipids", pp. 186-278, 1986, <i>Laboratory Techniques in Biochemistry and Molecular Biology</i> , Vol. 3
<i>Stu</i>	BW	Kyle, "Microalgae as a Source of EPA-Containing Oils", p. 1251, 1987, <i>J. Am. Oil Chem. Soc.</i> , Vol. 64

EXAMINER <i>Delia H. Kline</i>	DATE CONSIDERED <u>12-12-00</u>
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<i>[Signature]</i>	BY	Lepage et al., "Improved Recovery of Fatty Acid Through Direct Transesterification Without Prior Extraction or Purification", pp. 1391-1396, 1984, <i>J. Lipid Res.</i> , Vol. 25
<i>[Signature]</i>	BZ	Lipstein et al., "The Nutritional and Economic Value of Algae for Poultry" in <i>Algae Biomass</i> , G. Shelef and C.J. Soeder, eds., Elsevier/North-Holland Biomedical Press, 1980, pp. 667-685
<i>[Signature]</i>	CA	Lipstein et al., 1980, <i>Br. Poultry Sci.</i> , 21:9-21
<i>[Signature]</i>	CB	Mannella et al., "Interrelatedness of 5S RNA Sequences Investigated by Correspondence Analysis", pp. 228-235, 1987, <i>J. Mol. Evol.</i> , Vol. 24
<i>[Signature]</i>	CC	Miller, "Isolation and Pure Culture of Aquatic Phycomycetes by Membrane Filtration", pp. 524-527, 1967, <i>Mycologia</i> , Vol. 59
<i>[Signature]</i>	CD	Moss, "Biology and Phylogeny of the Labrinthulales and Thraustochytriales", pp. 105-129, 1986, in <i>The Biology of Marine Fungi</i> , (S.T. Moss ed., Cambridge University Press)
<i>[Signature]</i>	CE	Murty et al., 1961, <i>J. Nutrition</i> , 75:287-294
<i>[Signature]</i>	CF	Navarro et al., 1972, <i>J. Sci. Fd. Agric.</i> , 23:1287-1292
<i>[Signature]</i>	CG	Perkins, "Phylogenetic Considerations of the Problematic Thraustochytriaceae-Labrinthulid-Dermocystidium Complex Based on Observations of Fine Structure", pp. 45-63, 1974, <i>Veroff. Inst. Meeresforsch. Bremerh. Suppl.</i> , Vol. 5
<i>[Signature]</i>	CH	Pigot, "The Need to Improve Omega-3 Content of Cultured Fish", pp. 63-68, 1989, <i>World Aquaculture</i> , Vol. 20
<i>[Signature]</i>	CI	Pohl et al., "Fatty Acids and Lipids of Marine Algae and the Control of Their Biosynthesis by Environmental Factors", pp. 473-523, 1979, <i>Marine Algae in Pharmaceutical Science</i> , (Hoppe et al. eds.)
<i>[Signature]</i>	CJ	Reiser, 1951, <i>J. Nutrition</i> , 44:159-175
<i>[Signature]</i>	CK	Ryther, "Cultivation of Macroscopic Marine Algae", pp. 79-88, 1983, <i>Solar Energy Research Institute Aquatic Species Program Review. Proc of the March 1983 Principal Investigators Meeting</i> , SERI/CPI-231 1946
<i>[Signature]</i>	CL	Schlenk, "Urea Inclusion Compounds of Fatty Acids", pp. 243-267, 1954, <i>Prog. Chem. Fats and Other Lipids</i> , Vol. 2
<i>[Signature]</i>	CM	Schneider, "Cultivation of Micro-organisms. Section 3.2: Fungi", pp. 337-345, 1976, in <i>Marine Ecology</i> , Vol. 3, Part 1. <i>Cultivation</i> , (O. Kinne ed., Wiley and Sons)
<i>[Signature]</i>	CN	Simopoulos et al. (eds.), <i>Health Effects of Polyunsaturated Fatty Acids in Seafoods</i> , Chaps. 2-5, 7, 17, 1986, Academic Press)
<i>[Signature]</i>	CO	Sorokin, "Dry Weight, Packed Cell Volume and Optical Density", pp. 321-343, 1973 in <i>Handbook of Phycological Methods: Culture Methods and Growth Measurements</i> , (J.R. Stein ed., Cambridge University Press)
<i>[Signature]</i>	CP	Sparrow, <i>Aquatic Phycomycetes</i> , pp. 36-39, 1960, University of Michigan Press
<i>[Signature]</i>	CQ	Wassef, "Fungal Lipids", pp. 159-232, 1977, <i>Adv. Lipid Res.</i> , Vol. 15

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	CR	Weete, "Fatty Acids", pp. 49-95, 1980, in <i>Lipid Biochemistry of Fungi and Other Organisms</i> , (Plenum Press)
<i>Stu</i>	CS	Yamada et al., "Production of Arachidonic Acid and Eicosapentaenoic Acid by Microorganisms", p. 1254, 1987, <i>J. Am. Oil Chem. Soc.</i> , Vol. 64
<i>Stu</i>	CT	Akimoto et al., "Metal Salts Requisite for the Production of Eicosapentaenoic Acid by a Marine Bacterium Isolated from Mackerel Intestines", pp. 504-508, 1991, <i>JAACS</i> , Vol. 68, July.
<i>Stu</i>	CU	Ando et al., "Incorporation of n-3 Polyunsaturated Fatty Acids into Phospholipids of a Marine Bacterium <i>Vibrio</i> sp. Cultivated with Sardine Oil", pp. 169-171, 1992, <i>J. Ferm. Bioeng.</i> , Vol. 73.
<i>Stu</i>	CV	Bajpai et al., "Production of Docosahexaenoic Acid by <i>Thraustochytrium aureum</i> ", pp. 706-710, 1991, <i>Appl. Microbiol. Biotechnol.</i> , Vol. 35.
<i>Stu</i>	CW	Bajpai et al., "Effects of Aging <i>Mortierella</i> Mycelium on Production of Arachidonic and Eicosapentaenoic Acids", pp. 775-780, 1991, <i>JAACS</i> , Vol. 68, October.
<i>Stu</i>	CX	Bajpai et al., "Optimization of Production of Docosahexaenoic Acid (DHA) by <i>Thraustochytrium aureum</i> ATCC 34304, pp. 509-514, 1991, <i>JAACS</i> , Vol. 68, July.
<i>Stu</i>	CY	Bajpai et al., "Eicosapentaenoic Acid (EPA) Formation; Comparative Studies with <i>Mortierella</i> Strains and Production by <i>Mortierella elongata</i> ", pp. 1294-1298, 1991, <i>Mycol. Res.</i> , Vol. 95.
<i>Stu</i>	CZ	Boswell et al., "SCO Production by Fermentative Microalgae", pp. 274-286, 1992, in <i>Industrial Applications of Single Cell Oils</i> (Kyle et al., eds.), American Oil Chemists' Society, Champaign, IL.
<i>Stu</i>	DA	Cohen et al., "Overproduction of γ -Linolenic and Eicosapentaenoic Acids by Algae", pp. 569-572, 1992, <i>Plant Physiol.</i> , Vol. 98.
<i>Stu</i>	DB	Gandhi et al., "Production of the Polyunsaturated Fatty Acids Arachidonic Acid and Eicosapentaenoic Acid by the Fungus <i>Pythium ultimum</i> ", pp. 1825-1830, 1991, <i>J. Gen. Microbiol.</i> , Vol. 137.
<i>Stu</i>	DC	Hansen et al., "Effects of Culture Conditions on Accumulation of Arachidonic and Eicosapentaenoic Acids in Cultured Cells of <i>Rhizidiadelphus squarrosus</i> and <i>Eurhynchium striatum</i> ", pp. 1837-1841, 1991, <i>Phytochemistry</i> , Vol. 30.
<i>Stu</i>	DD	Kendrick et al., "Microbial Polyunsaturated Fatty Acids of Potential Commercial Interest", pp. 59-65, 1992, <i>SIM Industrial Microbiology NEWS</i> , Vol. 42.
<i>Stu</i>	DE	Kendrick et al., "Lipids of Selected Molds Grown for Production of n-3 and n-6 Polyunsaturated Fatty Acids", pp. 15-20, 1992, <i>LIPIDS</i> , Vol. 27.
<i>Stu</i>	DE	Kyle et al., "Bioproduction of Docosahexaenoic Acid (DHA) by Microalgae", pp. 287-300, 1992, in <i>Industrial Applications of Single Cell Oils</i> (Kyle et al., eds.), American Oil Chemists' Society, Champaign, IL.
<i>Stu</i>	DF	Kyle et al., "Microalgae as a Source of EPA-Containing Oils", pp. 117-121, 1988, <i>Proc. World Conf. Biotechnol. Fats Oils Ind.</i>
<i>Stu</i>	DG	Radwan, "Sources of C _n -Polyunsaturated Fatty Acids for Biotechnical Use", pp. 421-430, 1991, <i>Appl. Microbiol. Biotechnol.</i> , Vol. 35.

EXAMINER <i>Delbert W. W.</i>	DATE CONSIDERED 12-12-00
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<u>Sta</u>	DH	Yazawa et al., "Production of Eicosapentaenoic Acid from Marine Bacteria", pp. 29-51, 1992, in <i>Industrial Applications of Single Cell Oils</i> (Kyle et al., eds.), American Oil Chemists' Society, Champaign, IL.
<u>Sta</u>	DI	Yongmanitchai et al., "Screening of Algae for Potential Alternative Sources of Eicosapentaenoic Acid", pp. 2963-2967, 1991, <i>Phytochemistry</i> , Vol. 30.
<u>Sta</u>	DJ	Yamada et al., "Production of Dihomo- γ -Linolenic Acid, Arachidonic Acid and Eicosapentaenoic Acid by Filamentous Fungi", pp. 118-138, 1992, in <i>Industrial Applications of Single Cell Oils</i> (Kyle et al., eds.), American Oil Chemists' Society, Champaign, IL.
<u>Sta</u>	DK	Yongmanitchai et al., "Omega-3 Fatty Acids: Alternative Sources of Production", pp 117-125, 1989, <i>Proc. Biochem.</i>
<u>Sta</u>	DL	Behrens et al., "Eicosapentaenoic Acid From Microalgae," p. 253-259, 1989, <i>Novel Microb. Prod. Med. Agric.</i>
<u>Sta</u>	DM	Tornabene et al., "Sterols, Aliphatic Hydrocarbons, and Fatty Acids of a Nonphotosynthetic Diatom, <i>Nitzschia alba</i> ," in <i>Lipids</i> , 9/4:279(1974).
<u>Sta</u>	DN	Harrington and Holz, "The Monoenoic and Docosahexaenoic Fatty Acids of a Heterotrophic Dinoflagellate," in <i>Biochim., Biophys. Acta</i> , 164:137(1968).
<u>Sta</u>	DO	Haskins et al., "Steroids and the Stimulation of Sexual Reproduction of a Species of <i>Pythium</i> ," in <i>Canadian J. Microbiology</i> , 10:187(1964).
<u>Sta</u>	DP	Orcutt and Patterson, "Sterol, Fatty Acid and Elemental Composition of Diatoms Grown in Chemically Defined Media," in <i>Comp. Biochem. Physiol.</i> , 50B:579(1975).
<u>Sta</u>	DQ	STN Database, AN 88:13222 Biobusiness for Milchwissenschaft, 1988, vol. 43, No.3, pp 153, 155-158, Author: Hagemeister et al.
<u>Sta</u>	DR	Ulken, A. et al. On the role of Phycomycetes in the food web of different mangrove swamps with brackish waters and waters of high salinity; European Marine Biology Symposium, 29 September 1990, Abstract AN 81:19970

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EXAMINER <u>Julius K. Wace</u>	DATE CONSIDERED <u>12-12-00</u>
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